

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

LIBERTY MUTUAL INSURANCE
COMPANY as subrogee of MARC
RYSMAN,

Plaintiff,
v.

BROAN-NUTONE LLC,

Defendant.

No. 21-cv-11986-DLC

ORDER ON DEFENDANT'S MOTIONS

Cabell, U.S.M.J.

I. Introduction

Liberty Mutual Insurance Company ("Liberty") has brought a subrogation action against Broan-NuTone LLC ("Broan") to recover damages from a fire that allegedly started in a bathroom ceiling fan manufactured and sold by Broan. The fire occurred in a home owned and occupied by Marc Rysman and his family and insured by Liberty. Liberty asserts claims for: (1) negligence; (2) breach of implied warranty of merchantability; (3) breach of implied warranty of fitness for a particular purpose; and (4) violation of Massachusetts General Laws chapter 93A ("Chapter 93A"). (*Id.* at ¶¶ 11-24). In support of its claims, Liberty retained an expert to investigate and form an opinion on the origin and cause of the

fire. Broan moves to exclude the expert's opinion and moves also for summary judgment on all four claims; Liberty opposes both motions. (D. 35; 36; 38; 39). For the reasons explained below, the court grants Broan's motions.

II. Factual Background

On December 17, 2018, a fire occurred at the Brookline, Massachusetts home of Marc Rysman and Michelle Ephraim. (D. 38, p. 2).¹ Ava Rysman, the couple's daughter, was home alone when she heard the smoke alarm. (D. 38, p. 2). Ava left the home without going upstairs and called 911. (D. 37, p. 2; D. 38, p. 2). Liberty alleges that the fire started inside a ceiling fan installed in the second-floor bathroom. (D. 1, ¶6). The subject fan, a NuTone brand, model 763RLN, was installed prior to the Rysman's purchase of the home in 2006. (D. 37, p. 2). According to the Rysmans, the fan was functioning properly before the fire. (D. 37, p. 3).

Both parties hired experts to investigate the origin and cause of the fire. Liberty retained Jeremiah Pratt ("Pratt"), a

¹ Local Rule 56.1 requires a party filing a motion for summary judgment to "include a concise statement of the material facts of record as to which the moving party contends there is no genuine issue to be tried, with page references to affidavits, depositions, and other documentation." It also requires a party opposing a summary judgment motion to include a similar statement of facts "as to which it is contended that there exists a genuine issue to be tried." Here, somewhat confusingly, both parties provide statements of material facts that merely identify the exhibits attached to the parties' memoranda. However, as each party includes a separate section in its memorandum that lays out the relevant facts in a manner that complies with the rule, the court will simply take the facts from those sections, supplementing them with references to the exhibits where appropriate.

certified fire investigator and licensed professional engineer with twenty-five years of firefighting experience. (D. 37-2, Pratt Expert Report, p. 7). Pratt inspected the loss site twice: once on December 20, 2018, three days after the fire took place, and again as part of a joint scene examination on January 9, 2019. (D. 38, p. 2).

Four categories of items were collected during the joint examination: fan components from floor debris, ceiling fan artifacts, an exemplar fan from the second-floor bathroom, and wiring from the second-floor bathroom ceiling. (*Id.*). In addition to examining these items, Pratt took a witness statement from Marc Rysman, analyzed fire patterns and fire dynamics at the scene, reviewed photographs taken of the scene, and created an arcing map.² (D. 37-2, p. 13).

Pratt summarized his findings in an expert report. (D. 37-2). The report first considers the origin of the fire. (*Id.* at pp. 10-14). After formulating three origin hypotheses, Pratt evaluated each one based on evidence from the scene and determined the most probable area of origin was the void space above the ceiling of the second-floor bathroom. (*Id.* at pp. 13-14).

² Arcing refers to "a high-temperature luminous electric discharge across a gap or through a medium such as charred insulation"). National Fire Protection Association, User's Manual for NFPA 921: Guide for Fire and Explosion Investigations ("NFPA 921"), §§ 3.3.8-9, 11 (2024 ed.). Arc mapping is the process of diagramming arcing events. *Id.* Pratt created a diagram of the Rysman's second floor bathroom, including blue lines to indicate arc patterns and red circles to show where electrical activity occurred. (D. 37-2, p. 12).

Next, in a section titled "Cause Hypothesis Testing," Pratt's report homes in on a more specific point of origin.³ (*Id.* at p. 15). Pratt hypothesized that the fire could have started in two different locations within a fan in the ceiling, either in the fan's motor or in its connection junction box.⁴ (*Id.* at pp. 19-20). Based on his examination of the physical evidence, Pratt selected what he believed to be the more probable hypothesis, namely that the fire started in the connection junction box. (*Id.* at pp. 20-21).

After determining that the connection junction box was the most probable ignition location, Pratt's report asserts that the fire was caused by electrical activity in the box that ignited lightweight combustible dust and lint. (*Id.* at p. 22). The report goes on to state that vibration from the fan caused a free-hanging wire to rub against a metal divider in the box, wearing through the wire's insulation and eventually causing the electrical activity that started the fire. (D. 37-2, pp. 7, 23). Based on

³ Although Pratt's report refers to this section as a cause analysis, it is really a more specific origin analysis. "Cause" refers to the circumstances or conditions that brought about or resulted in a fire, whereas "origin" refers to the physical location where the fire began. NFPA 921, §§ 3.3.28, 153.

⁴ As the name implies, a connection junction box is an electrical receptacle (typically enclosed) where multiple wires are brought together and connected to one another as necessary. See *Donovan v. Daniel Constr. Co.*, 692 F.2d 818, 819-20 (1st Cir. 1982). Broan's expert, Stephen Campolo, asserts that this part of the fan is not really a junction box but rather the fan's metal housing. (D. 38-1, Campolo Deposition Transcript, pp. 124:20-125:4). This dispute is ultimately immaterial, so the court will adopt Pratt's terminology for clarity.

that conclusion, Pratt opined that Broan, as the fan's manufacturer, was responsible for the fire. (D. 37-2, p. 23).

III. Legal Standard

A. Summary Judgment Standard

The role of summary judgment is "to pierce the pleadings and to assess the proof in order to see whether there is a genuine need for trial." *Carrozza v. CVS Pharmacy, Inc.*, 992 F.3d 44, 56 (1st Cir. 2021) (internal quotation omitted). Summary judgment is appropriate if there is no genuine dispute of material fact and the moving party is entitled to judgment as a matter of law. *Lima v. City of E. Providence*, 17 F.4th 202, 206 (1st Cir. 2021). "An issue is 'genuine' if it can be 'resolved in favor of either party,' and a fact is 'material' if it 'has the potential of affecting the outcome of the case.'" *Feliciano-Muñoz v. Rebarber-Ocasio*, 970 F.3d 53, 62 (1st Cir. 2020) (quoting *Tang v. Citizens Bank, N.A.*, 821 F.3d 206, 215 (1st Cir. 2016)). The moving party has the initial burden to demonstrate the absence of such a genuine dispute. Fed. R. Civ. P. 56(a); *Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986).

Once the moving party has satisfied its burden, the burden shifts to the non-moving party to set forth specific facts showing that there is a genuine, triable dispute. *Celotex*, 477 U.S. at 324. The court must view the entire record in the light most favorable to the non-moving party and indulge all reasonable

inferences in that party's favor. *Friends of Merrymeeting Bay v. Hydro Kennebec, LLC*, 759 F.3d 30, 34 (1st Cir. 2014). However, “[w]hen adjudicating a motion for summary judgment, a district court customarily may consider only evidence that would be admissible at trial.” *Klauber v. VMware, Inc.*, 80 F.4th 1, 7 (1st Cir. 2023) (discussing exception to rule that does not apply to this case).

B. *Daubert* in the Context of Summary Judgment

Broan combines much of its summary judgment argument with the separate but conceptually related argument that the court should exclude a portion of Pratt's expert opinion as unreliable. Expert testimony may be admissible if “scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue” and if the proposed witness is qualified as an expert by some specialized “knowledge, skill, experience, training, or education.” *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 588 (1993) (quoting Fed. R. Evid. 702). Under the familiar *Daubert* standard, the court weighs reliability and relevance in assessing “whether the reasoning or methodology underlying [expert] testimony is scientifically valid and . . . whether that reasoning or methodology properly can be applied to the facts in issue.” *Id.* at 592–93; see *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 147 (1999) (clarifying that *Daubert* applies to all expert testimony). That assessment considers

factors including whether the theory or technique has been tested; whether it has been subjected to peer review and publication; in the case of a technique, its known or potential rate of error as well as the existence and maintenance of any standards controlling its operation; and the extent of its acceptance within the relevant scientific community. *Daubert*, 509 U.S. at 592–94.

Federal Rule of Evidence 702 ("Rule 702") "incorporates the reasoning of the Supreme Court of the United States in *Daubert* . . . [and] 'affirms the trial court's role as gatekeeper.'" *Rodriguez v. Hosp. San Cristobal, Inc.*, 91 F.4th 59, 70 (1st Cir. 2024) (quoting Fed. R. Evid. 702 advisory committee's notes to 2000 amendment). Rule 702 establishes that expert testimony may be admitted into evidence only if it is "based on sufficient facts or data," is "the product of reliable principles and methods," and "reflects a reliable application of the principles and methods to the facts of the case." *Id.* at 71 (citing Fed. R. Evid. 702). Under *Daubert* and Rule 702, the burden on the party who proffers expert testimony is not to prove that an expert's conclusion is correct but rather that the expert reached their conclusion in a scientifically sound and methodologically reliable way. *Ruiz-Troche v. Pepsi Cola of P.R. Bottling Co.*, 161 F.3d 77, 85 (1st Cir. 1998).

Of note, the Rules Committee recently amended Rule 702 to emphasize that (1) the proponent of expert testimony bears the

burden of demonstrating by a preponderance of the evidence that the testimony is admissible and (2) "each expert opinion must stay within the bounds of what can be concluded from a reliable application of the expert's basis and methodology." Fed. R. Evid. 702 advisory committee's notes to 2023 amendment.

The *Daubert* analysis contains an extra wrinkle when confronted at the summary judgment stage. The court can apply *Daubert* at summary judgment, but "[b]ecause the summary judgment process does not conform well to the discipline that *Daubert* imposes, the *Daubert* regime should be employed only with great care and circumspection at [that] stage." *Cortés-Irizarry v. Corporacion Insular De Seguros*, 111 F.3d 184, 188 (1st Cir. 1997). The problem is that courts typically have only a "truncated record" at summary judgment, whereas *Daubert* requires a "complex factual inquiry." *Id.* Thus, "where *Daubert* intersects with summary judgment practice, *Daubert* is accessible, but courts must be cautious . . . not to exclude debatable scientific evidence without affording the proponent of the evidence adequate opportunity to defend its admissibility." *Id.* Nonetheless, "[t]he [court's] obligation to perform this [*Daubert*] gatekeeping role necessarily applies at the summary judgment stage of litigation given the objective to avoid prolonging a case that lacks merit." *Hoover v. Hyatt Hotels Corp.*, --- F.4th ---, 2024 WL 1714999, at *10 (1st Cir. 2024).

Here, Broan's motion for summary judgment is so closely intertwined with its motion to exclude Pratt's expert testimony that the court cannot rule on the former without essentially ruling on the latter. While trial typically "provide[s] the best operating environment" for a *Daubert* assessment, *id.*, here the court will assess the evidence on record pursuant to *Daubert* to resolve the motion for summary judgment. In doing so, the court acknowledges the First Circuit's caution against excluding evidence without affording an adequate opportunity to defend its admissibility. Here, Liberty had the chance to defend the admissibility of Pratt's testimony in its opposition to the motion to exclude and again at oral argument after the court raised the specific issues discussed below. *Cf. United States v. Crater*, 93 F.4th 581, 591 (1st Cir. 2024) (affirming district court's admission of expert testimony without conducting an evidentiary hearing). Moreover, the court will consider Pratt's testimony from his deposition, where he was questioned about his conclusions and given an opportunity to explain them.⁵

IV. Discussion

A. *Daubert* Analysis

Broan's objection to Pratt's testimony is a relatively narrow one that attacks Pratt's opinion as to what caused the fire. In

⁵ It bears noting that Liberty had the opportunity to ask its own questions of Pratt at his deposition to clarify the bases for his opinions if it believed such clarification was necessary.

fact, there are certain key points on which the parties appear to agree. First, there is no dispute that Pratt's extensive training as a fire investigator and professional engineer, combined with his degree in electrical engineering and his experience analyzing fire patterns, qualify him as an expert. Second, the parties do not dispute that the National Fire Protection Association's Guide for Fire and Explosion Investigations ("NFPA 921"), to which Pratt cites, is a widely accepted and appropriate industry standard for conducting fire investigations. (D. 38, p. 8; D. 40). Indeed, courts often refer closely to NFPA 921 when weighing the relevant *Daubert* factors in cases involving fire investigations. See *Netherlands Ins. Co. v. HP, Inc.*, 646 F. Supp. 3d 139, 145–46 (D. Mass. 2022) (collecting cases). Third, Broan does not challenge Pratt's opinion that the fire started in the fan's connection junction box, at least for the purposes of the motion to exclude.

Zeroing in on their objection, Broan asserts that Pratt's opinion that the fan's vibration caused its internal wiring insulation to abrade, which then led to the fire, is scientifically unsupported and unreliable, and thus inadmissible under Rule 702. Specifically, Broan identifies three alleged deficiencies in Pratt's opinion: (1) Pratt had no evidence of unusual vibrations; (2) Pratt had no scientific basis for his assumption that the appliance wire insulation could be abraded away or how that might happen; and (3) Pratt has no scientific basis for concluding that

arching on the steel scroll in the connection junction box caused the fire rather than arcing on nearby branch wiring. Of these, Broan's second argument ultimately prevails.⁶

Liberty contends that Pratt relied on NFPA 921 in reaching each of his conclusions. As previously discussed, "NFPA 921 . . . is widely accepted as the standard guide in the field of fire investigation." *United States v. Hebshie*, 754 F. Supp. 2d 89, 111 (D. Mass. 2010). However, "an expert who purports to follow NFPA 921 must apply its content reliably." *Russell v. Whirlpool Corp.*, 702 F.3d 450, 455 (8th Cir. 2012); *see also Werth v. Hill-Rom, Inc.*, 856 F. Supp. 2d 1051, 1060 (D. Minn. 2012) (noting expert's purported reliance on NFPA 921 does not automatically make opinion admissible). The question, then, is whether Pratt reliably applied the principles of NFPA 921 in forming his opinion about the cause of the fire.

Liberty devotes much of its argument to defending Pratt's utilization of "cognitive testing". When properly conducted,

⁶ Because Broan's second argument carries the day, the court only briefly comments on the other two. Broan's first argument does not go far because it misapprehends Pratt's causation theory. According to Pratt, the vibration that caused the abrasion was the ordinary vibration that any bathroom fan would experience as it operates. (D. 37-3, Pratt Deposition Transcript, p. 146:8-14). As such, the theory does not depend on the existence of any unusual vibrations. As to Broan's third argument, Pratt, in the court's view, could have reliably concluded that the arcing event in the connection junction box caused the fire based in part on his having narrowed the origin to that box. See note 10, *infra*. That conclusion may ultimately be incorrect, but it is sufficiently reliable to be admissible. See *Ruiz-Troche*, 161 F.3d at 85. Ultimately, where Pratt's opinion falters is not on his conclusion that the arcing event caused the fire, but rather his conclusion that the fan's vibration caused abrasion of insulation on the fan's internal wiring, and thus the arcing event and the fire.

cognitive testing tests a hypothesis against relevant evidence. See NFPA 921, § 19.6.4 (cognitive testing includes “set[ting] up a premise and test[ing] it against the data”)⁷; *Fireman’s Fund Ins. Co. v. Canon U.S.A., Inc.*, 394 F.3d 1054, 1058 (8th Cir. 2005) (“NFPA 921 requires that hypotheses . . . be carefully examined against empirical data obtained from fire scene analysis and appropriate testing.”). During cognitive hypothesis testing, an investigator will use their knowledge, experience, “thinking skills[,] and judgment to evaluate the empirical data and challenge the conclusions of the final hypothesis.” *Great N. Ins. Co. v. Ruiz*, 688 F. Supp. 2d 1362, 1373 (S.D. Ga. 2010) (quoting National Fire Protection Agency, User’s Manual for NFPA 921: Guide for Fire and Explosion Investigations 17 (2005)). Liberty is certainly correct that cognitive testing is generally an acceptable method for conducting fire investigations. See NFPA 921, § 19.6.4 (“Hypothesis testing may include any application of fundamental principles of science, physical experiments or testing, cognitive experiments, analytical techniques and tools, and systems analysis.”)⁸ (emphasis added); see *Woods Hole Oceanographic Inst.*

⁷ NFPA 921 provides the following example of cognitive testing: “If it were posited that the door was open during the fire and the hinges were found with mirror image patterns, [which would be inconsistent with the door being open,] then the hypothesis would be disproved.” NFPA 921, § 19.6.4.4.

⁸ This language from the 2024 edition of the NFPA 921 is not meaningfully different from the standards articulated in the 2017 and 2021 editions on which Pratt relied. (D. 37-3, Pratt Deposition Transcript, pp. 31:13-31:21).

v. ATS Specialized, Inc., Civil Action No. 17-12301-NMG, 2021 WL 9860239, at *5 (D. Mass. May 27, 2021) ("NFPA 921 specifically provides that deductive reasoning and cognitive testing may satisfy the testing requirement.").

Examples of proper cognitive testing abound. In *Woods Hole Oceanographic Institution*, the plaintiff retained an expert to opine on the origin and cause of a fire that started in a trailer's left rear wheel. 2021 WL 9860239, at *1. The expert "inspected the subject trailer four times, obtained and examined exemplar components of the subject trailer, including a push-pull valve, relay valve, and two-way check valve, and compared them with the pneumatic schematics provided by the trailer manufacturer and technical reference manuals." *Id.* at *4. Next, the expert applied his relevant training and experience to the evidence collected to "formulate and test his hypotheses and ultimately render his opinions in the case." *Id.* Based on a comparison of the evidence with pneumatic schematics, the expert identified a leak in the push-pull valve, concluded that the leak caused the fire, and explained how the leak created the conditions that allowed for the fire to start. *Id.* at *2, *4. The court deemed the expert's testimony sufficiently reliable based on cognitive testing. *Id.* at *5.

Cognitive testing can also consist of determining the most likely of several competing hypotheses based on the evidence. For

instance, in *Medina v. Daimler Trucks N. Am., LLC*, Civil Action No. 10-623 (JLL), 2014 WL 7405210 (D.N.J. Dec. 30, 2014), the plaintiff engaged an engineer to determine what caused her husband's tractor-trailer to catch fire when it was involved in a highway accident. The engineer opined that the most likely cause of the fire was "electrical arcing that occurred when the battery box separated from the truck." *Id.* at *8. At his deposition, defense counsel asked the engineer whether several other ignition sources could have started the fire. *Id.* The expert conceded that each was a possible source of ignition, but he explained why each alternative was less likely than his electrical arcing theory based on evidence such as witness statements and his knowledge of the circumstances that would be required for each alternative to cause a fire. *Id.* at *8-*9. The court found that the expert applied NFPA 921 appropriately through this approach. *Id.* at *9; see also *Great N. Ins. Co.*, 688 F. Supp. 2d at 1373 (approving expert's use of a "process of elimination" to conclude that spontaneous combustion of oil-stained rags was the most likely cause of a fire).

Of course, there are limits to what qualifies as cognitive testing. "[C]ognitive testing cannot produce reliable results without some underlying basis for an opinion." *Del Baggio v. Maytag Corp.*, Civil Action No. 3:05-378, 2010 WL 11566305, at *3 (W.D. Penn. Feb. 26, 2010); see also *Oddi v. Ford Motor Co.*, 234

F.3d 136, 156 (3d Cir. 2000) ("Although *Daubert* does not require a paradigm of scientific inquiry as a condition precedent to admitting expert testimony, it does require more than [a] haphazard, intuitive inquiry."); *Trusty v. Sunbeam Prods., Inc.*, No. 2:13-CV-02039, 2014 WL 1410259, at *5 (W.D. Ark. Feb. 19, 2014) ("The court cannot find Durham's testimony to be sufficiently reliable unless it is based, at least in part, on something more than Durham's own speculation."). It is insufficient for an expert to conclude that a particular event caused a fire without identifying some basis to believe that event likely occurred. See *Werth*, 856 F. Supp. 2d at 1061 ("But as the emphasized language above indicates, the Report simply describes ways in which a chip could have broken free of the quartz tube and made its way to the bassinet; it is replete with possibilities and conjecture.") (emphasis in original); *Allstate Ins. Co. v. Ford Motor Co.*, No. CV-08-2276-PHX-NVW, 2010 WL 1654145, at *7 (D. Ariz. Apr. 21, 2010) ("For Mr. Hogge's deductions to hold water, it must be at least possible, if not probable, that brake fluid penetrated the ECU far enough to come into contact with the energized circuitry.").

Here, Pratt's investigation into the fire's origin demonstrates that he is certainly capable of performing proper cognitive testing. First, to determine the general area of origin, Pratt formulated three hypotheses based on an initial evaluation of evidence. (D. 37-2, p. 12). Pratt tested these hypotheses by

analyzing fire patterns, including the location of charring and soot damage, and examining and ruling out potential ignition sources. (*Id.*). Having considered the evidence, Pratt was able to rule out the possibility that the fire had started in the second-floor bathroom or the third-floor bathroom crawl space, leaving the void space above the second-floor bathroom as the only potential origin. (*Id.* at pp. 13-14).

Next, Pratt developed two hypotheses for possible ignition locations, finding the fire most likely originated in either the ceiling fan's motor or its connection junction box.⁹ (*Id.* at pp. 19-20). Pratt determined that the fire most likely did not start in the fan's motor, in part because after the fire the motor was still partially covered in a paper wrap that most likely would have been consumed had the fire begun there. (*Id.* at p. 20). By contrast, evidence of arcing between wiring in the connection junction box and an internal steel divider made the box a more likely origin. (*Id.*). At both stages, Pratt developed multiple hypotheses, evaluated the hypotheses in light of the physical evidence, and selected the hypothesis that best fit the evidence. This is exactly the type of cognitive testing process that courts often uphold as reliable. See *Woods Hole*, 2021 WL 9860239, at *5; *Medina*, 2014 WL 7405210, at *9.

⁹ Pratt's report is not crystal clear as to how he narrowed the area of origin from the void space to the fan itself. Ultimately, this potential gap is not relevant to the court's ruling.

On the other hand, Pratt's causation opinion stands in stark contrast to the rest of his report. First, Pratt opines that "electrical activity in the fan connection junction box" initially ignited the fire, but the report does not explain how Pratt determined that electrical activity started the fire apart from vague statements that Pratt examined all available evidence in the laboratory and collected and analyzed research and manufacturer data.¹⁰ (D. 37-2, p. 21). Pratt goes on to conclude that vibration from the fan during its operation caused an internal wire to rub against a metal divider inside the fan, eventually wearing through the wire's insulation and causing the arcing event that started the fire, but nothing in the report begins to explain how Pratt reached that conclusion.¹¹ (*Id.* at p. 22).

¹⁰ Notwithstanding the lack of clarity in his report, one can fairly infer that Pratt based his conclusion that electrical activity in the connection junction box started the fire on physical evidence that an arcing event occurred within the connection junction box, such as the internal wire that was found fused to a metal divider after the fire. (*Id.* at p. 16). Thus, giving Pratt the benefit of the doubt, one could find that he conducted adequate cognitive testing as to this portion of his opinion. See *Great N. Ins. Co.*, 688 F. Supp. 2d at 1372-73 (expert first determined area of origin, then eliminated possible causes within that area).

¹¹ In his report, Pratt raises the possibility of providing a supplemental report if needed, including, for example, "[a] complete and thorough detailing of the collection of data and analysis relative to cause." (D. 37-2, p. 14). Similarly, at his deposition, Pratt described his report as a "summary" or less than a "full report," indicating multiple times that he could supplement the report if necessary. (D. 37-3, pp. 11:5-10, 70:9-11, 155:3-9, 157:4-6). At that time, Pratt had not begun preparing a supplemental report. (*Id.* at p. 155:12-13). Nothing in the record indicates that Pratt ever wrote a supplemental report or that Liberty asked him to do so. The court thus presumes that Pratt's report, as clarified at his deposition, is complete. See Fed. R. Civ. P. 26(a)(2)(B)(i) (expert's written report must contain "a complete statement of all opinions the witness will express and the basis and reasons for them"); Fed. R. Civ. P. 26(e)(2) ("[T]he party's duty to supplement [expert

Pratt's deposition testimony did not help him in this regard. He testified that the vibration he mentions in his report is the ordinary vibration that any fan would experience as it operates, but he admitted to never having measured such vibration, and he was not specifically aware of anyone else who had done so. (D. 37-3, Pratt Deposition Transcript, p. 146:8-147:1). Further, when asked whether he knew if the wires specifically vibrated, Pratt responded, "either the wires vibrated, or the metal shroud vibrated." (*Id.* at p. 147:15-18). Pratt explained he knew this "because [the vibration] wore through the insulation and created electrical activity" and "[b]ecause a fan that's on is going to have vibrations." (*Id.* at p. 147:19-24). When asked whether he tested the theory that vibration caused the wire insulation to wear off, Pratt claimed he performed "cognitive[] test[ing]," by "relying on [his] education, training, and experience." (*Id.* at p. 148:1-5). In essence, then, Pratt's explanation for the arcing event is that vibration abraded the wire's insulation, and his explanation for how he knows the vibration abraded the wire's insulation is that there was an arcing event.

This supposition is something less than true cognitive testing. Pratt does not identify any evidence tending to show that the wire rubbed against the metal divider or that any abrasion

disclosures] extends both to information included in the report and to information given during the expert's deposition.").

occurred, *cf. Woods Hole*, 2021 WL 9860239, at *4, nor does he identify or disprove any other hypotheses, *cf. Medina*, 2014 WL 7405210, at *8-*9. He also does not point to any evidence suggesting that the vibration he describes could have worn through the wire's insulation, much less any evidence that such a result was probable. See *Allstate*, 2010 WL 1654145, at *7. When asked if he was aware of any physical test that shows it is possible for wire insulation to wear through in this way, Pratt indicated that he could only point to his "training, education[,] and experience." (D. 37-3, p. 148:11-17). As such, Pratt's analysis is devoid of any reference to empirical data, contrary to what NFPA 921 requires for cognitive testing and contrary to his own origin analysis. See *Fireman's Fund Ins. Co.*, 394 F.3d at 1058.

In sum, Pratt's conclusion that the fan's vibration led to an abrasion of internal wiring insulation is not based on valid cognitive testing, nor is it undergirded by any specific, generally accepted scientific principles. See *Daubert*, 509 U.S. at 594. The only connection between Pratt's theory and the evidence of electrical activity is his *ipse dixit*, which means "there is simply too great an analytical gap between the data and the opinion proffered" for the opinion to be admissible. *General Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997). Therefore, the court will exclude Pratt's opinion that the fan's vibration caused an internal

wire and the metal divider to rub together, which in turn abraded the wire's insulation and caused an arcing event and the fire.

B. Summary Judgment Analysis

Having resolved the admissibility of Pratt's expert opinion, the court now turns to the motion for summary judgment. As nothing in the complaint raises any questions of federal law, and Liberty and Broan are citizens of different states, (D. 44, Joint Statement of the Parties), it appears that Liberty is invoking the court's diversity jurisdiction.¹² See 28 U.S.C. § 1332(a)(1). The parties both apply Massachusetts law in their filings, and so the court will "accept the parties' reasonable agreement that Massachusetts law controls." *Martins v. Vt. Mut. Ins. Co.*, 92 F.4th 325, 328 (1st Cir. 2024); see *Borden v. Paul Revere Life Ins. Co.*, 935 F.2d 370, 375 (1st Cir. 1991) (holding that "a federal court sitting in diversity is free, if it chooses, to forgo independent analysis and accept the parties' agreement" as to what law controls).

1. Breach of Implied Warranty of Merchantability

Under Massachusetts law, there is no "strict liability in tort for defective products." *Commonwealth v. Johnson Insulation*, 682 N.E.2d 1323, 1326 (Mass. 1997). Rather, a duty is imposed on merchants in the form of a warranty that is intended to "establish liability as comprehensive as that to be found in other

¹² The complaint erroneously cites to M.G.L. c. 212, § 3, as the basis for the court's jurisdiction over this action. (D. 1, ¶ 4). That statute concerns the original jurisdiction of the Massachusetts Superior Court.

jurisdictions that have adopted the tort of strict product liability." *Id.* A products liability claim must be brought as "a claim for breach of the implied warranties of merchantability and/or fitness for a particular purpose under [M.G.L. c.] 106, §§ 2-314 and 2-315, or of an express warranty under § 2-313."

Phillips v. Medtronic, Inc., 754 F. Supp. 2d 211, 216 (D. Mass. 2010) (citing *Commonwealth v. Johnson Insulation*, 682 N.E.2d 1323, 1326 (Mass. 1997)). The implied warranty of merchantability requires that goods be "fit for the ordinary purposes for which such goods are used." M.G.L. c. 106, § 2-314. "The 'ordinary purposes' contemplated by this section include both those uses which the manufacturer intended and those which are reasonably foreseeable." *Back v. Wickes Corp.*, 378 N.E.2d 964, 969 (Mass. 1978). "'Fitness' is a question of degree that primarily, although not exclusively, concerns reasonable consumer expectations." *Haglund v. Philip Morris, Inc.*, 847 N.E.2d 315, 322 (Mass. 2006) (citing *Back*, 378 N.E.2d at 694).

To prove a breach of implied warranty, a plaintiff must show "a defect in the product or an unreasonably dangerous condition which existed at the time the product left the [manufacturer's] control." *Enrich v. Windmere Corp.*, 616 N.E.2d 1081, 1085 (Mass. 1993) (citation omitted). "A product may be defective and unreasonably dangerous because of a manufacturing defect, a design defect, or a warning defect." *Evans v. Lorillard Tobacco Co.*, 990

N.E.2d 997, 1010 (Mass. 2013) (citing Restatement (Third) of Torts: Products Liability § 2, at 14 (1998)). Here, Liberty alleges either a design defect or a manufacturing defect. (D. 1, ¶¶ 14–16). Typically, “[t]he presence of . . . a defect cannot be inferred in the absence of expert testimony.” *Enrich*, 616 N.E.2d at 1084; see also *Esturban v. Mass. Bay Transp. Auth.*, 865 N.E.2d 834, 835 (Mass. App. Ct. 2007) (finding expert testimony was required to prove narrowness of escalator caused plaintiffs’ injuries, as “an escalator is a complex, technical piece of machinery, whose design and operational requirements are not straightforward . . . and beyond the scope of an average person’s knowledge”).

a. Design Defect

A product is defectively designed if, as designed, it is “defective and unreasonably dangerous . . . for the ordinary purposes for which it is fit.” *Haglund*, 847 N.E.2d at 322 (internal quotation marks and citation removed). To prove a design defect, a plaintiff must show that the entire product line is defective, not just the specific unit. *Pub. Serv. Mut. Ins. v. Empire Comfort Sys., Inc.*, 573 F. Supp. 2d 372, 380 (D. Mass. 2008). Moreover, the plaintiff must demonstrate that the defect was present at the time the product was sold and that the defect caused the plaintiff’s injury. *Haglund*, 847 N.E.2d at 322; *Enrich*, 616 N.E.2d at 1084.

Liberty's only evidence of a defect in the subject fan is Pratt's opinion that the vibration of the internal wiring or the metal divider caused abrasion of the wire's insulation, and, ultimately, the fire, combined with his related opinions on how Broan could have designed the fan to avoid this abrasion.¹³ As discussed above, Pratt's conclusion on the wire abrasion is inadmissible. Without this testimony, there is no other evidence that the configuration of the wires, the insulation, or any other component of the fan's design was defective. Evidence that the fire started in the fan's connection junction box, without evidence explaining how the fire started, is insufficient to prove a design defect. See *Enrich*, 616 N.E.2d at 1084 (affirming directed verdict for defendant where "[t]he evidence did warrant the conclusion that the fan was the source of the fire, but there was no evidence that some defect in the fan caused the fire").¹⁴ Therefore, Liberty cannot succeed on a design defect theory.

¹³ Pratt opines that Broan could have avoided the abrasion problem by utilizing "internal strain relief, wire covering, or . . . terminal blocks" in the fan's design. (D. 37-2, p. 22). Because Liberty lacks admissible evidence to prove that any abrasion occurred, Pratt's opinion on how Broan could have avoided any such abrasion does not move the needle here.

¹⁴ In some cases, through the doctrine of *res ipsa loquitur*, a jury may be able to infer the existence of a defect from the occurrence of an accident that would not ordinarily happen in the absence of some defective condition. *Enrich*, 616 N.E.2d at 1084-85. This is not such a case. See *id.* (finding, in case about a fan catching fire, that "[t]he jury would not be warranted in finding that it was more probable that the fire occurred because of a defect or malfunction in the fan instead of some other cause for which the defendant is not responsible"). For its part, Liberty acknowledged at oral argument that it could not prevail without Pratt's expert opinion.

b. Manufacturing Defect

"A defect from manufacturing, as opposed to design, occurs when a product differs from identical products issued from the same manufacturer." *Wasylow v. Glock, Inc.*, 975 F. Supp. 370, 377 (D. Mass. 1996) (citing *Back*, 378 N.E.2d at 970). As with a design defect, the plaintiff must demonstrate that the alleged manufacturing defect likely caused the complained-of injury. *Enrich*, 616 N.E.2d at 1084.

Here, Liberty has adduced no evidence that the fan in the Rysmans' second-floor bathroom deviated in any way from any other fan in the same product line, and there is no indication that the one alleged defect Pratt identified, namely, the free-hanging wire in the connection junction box, was unique to this one fan. At most, Liberty offhandedly remarks in its opposition to Broan's *Daubert* motion that the steel divider in the connection junction box clearly was not smooth based on photographs taken after the fire. (D. 38, p. 14). Even so, there is no evidence that the divider was not smooth prior to the fire or that it otherwise deviated from the dividers in other identical fans. See *Enrich*, 616 N.E.2d at 1085 ("To impose liability on the defendant, the plaintiff would need to prove a defect in the product or an unreasonably dangerous condition which existed at the time the product left the defendant's control."). Accordingly, Liberty cannot meet its burden to show a manufacturing defect in the fan.

Based on the admissible evidence in the record, the court finds that Liberty cannot demonstrate that Broan designed or manufactured the subject fan defectively. Broan is therefore entitled to summary judgment on the breach of implied warranty of merchantability claim.

2. *Negligence*

Liberty argues that Broan was negligent in its design and/or maintenance of the subject fan. Whereas breach of warranty focuses on the product, negligence focuses on the actions of the manufacturer. *One Beacon Ins. Co. v. Electrolux*, 436 F. Supp. 2d 291, 295–96 (D. Mass. 2006) (citing *Correia v. Firestone Tire & Rubber Co.*, 446 N.E.2d 1033, 1039 (Mass. 1983)). To prevail on either a negligence or breach of warranty claim, the plaintiff must present evidence of a defect. See *Netherlands Ins. Co.*, 646 F. Supp. 3d at 146 (citing *Mass. Prop. Ins. Underwriting Ass'n v. LG Elecs. U.S.A., Inc.*, 902 F. Supp. 2d 173, 176 (D. Mass. 2012)). As discussed above, Liberty lacks admissible evidence that shows either a design defect or a manufacturing defect. Consequently, Liberty cannot succeed on its negligence claim. See *id.*

3. *Breach of Implied Warranty of Fitness for a Particular Purpose*

Under Massachusetts law, an implied warranty of fitness for a particular purpose exists “[w]here the seller at the time of contracting has reason to know any particular purpose for which

the goods are required and that the buyer is relying on the seller's skill or judgment to select or furnish suitable goods." M.G.L. c. 106, § 2-315. "A particular purpose differs from an ordinary purpose in that it envisages a specific use by the buyer which is peculiar to the nature of his business." *Pub. Serv. Mut. Ins.*, 573 F. Supp. 2d at 381 (internal quotation marks omitted). There is no implied warranty unless the purchaser communicates the particular purpose he has in mind for the product to the seller. *Rule v. Fort Dodge Animal Health, Inc.*, 604 F. Supp. 2d 288, 297 (D. Mass. 2009), aff'd, 607 F.3d 250 (1st Cir. 2010).

Here, the subject fan was used for its intended, ordinary purpose as a bathroom ceiling fan. A product's ordinary purpose is necessarily not a particular purpose giving rise to an implied warranty. See *id.*; *Pub. Serv. Mut. Ins.*, 573 F. Supp. 2d at 381. Likewise, there is no evidence in the record that the Rysmans or any previous owners of the home ever communicated with Broan about their intended use for the fan. As such, Liberty cannot establish the existence of an implied warranty of fitness for a particular purpose and therefore cannot prove a breach of such a warranty.

4. Chapter 93A

Liberty's Chapter 93A claim is premised on Broan's alleged breach of the implied warranties discussed above. (D. 1, ¶¶ 22-24). When "[a]n implied warranty claim and a c. 93A claim are based on the same economic theory of injury and the same set of

alleged facts, they should survive or fall under the same analysis." *Iannacchino v. Ford. Motor Co.*, 888 N.E.2d 879, 889 (Mass. 2008). Because, as discussed above, Liberty cannot prevail on its breach of implied warranty claims, it likewise cannot prevail on its Chapter 93A claim.

V. Conclusion

For the foregoing reasons, the defendant's motion to exclude expert testimony is GRANTED, and the defendant's motion for summary judgment on all claims is also GRANTED.

/s/ Donald L. Cabell
DONALD L. CABELL, U.S.M.J.

DATED: April 26, 2024